

Navigating the road to digital supply chain transformation

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It seems that no self-respecting company can be without a digital transformation (DT) strategy these days. But shifting an organization from an analog mindset to the brave new world of digitalization is a long and challenging journey. Where do you start, how do you prepare employees, and once there, how do you engender trust in digitalized processes?

These issues were explored from a retail industry perspective at a recent MIT CTL roundtable. The Future of Retailing roundtable took place on November

14-15 2018, and brought together supply chain practitioners from various organizations including manufacturers, retailers and third-party logistics providers.

The discussions did not yield any magic bullets—there aren't any, of course—but they did produce a number of insights that can help companies tread easier as they quest toward a digitalized supply chain future.

Getting started

Identifying a starting point in the journey is not easy, especially when companies are deluged with information and advice on how they should proceed. But rather than spending vast amounts of time considering possibilities and generating a lot of frustration, another approach is to opt for any project that gets you on your way and is likely to deliver some successes—even modest ones—that can be easily shared and engage the organization.

This might seem a little too serendipitous, but you can refine your search criteria to increase the chances of success. For example, choose an external supply chain partner that is motivated and needs your contribution, has experience and knowledge it is willing to impart, and is interested in a specific project that can be scaled and quantified. As the partnership develops, you can expand your horizons to other partners.

A global developer and manager of retail supply chains took this approach and is now well into its DT journey. The enterprise chose to partner with a leading apparel manufacturer that has decided

to do business only with suppliers that are digitally-able. The overarching aim was to reduce the design-to-store cycle time for garments. To achieve this goal, they developed a digital platform that enables stakeholders to interact with designers in real time, and to collect feedback from customers on prototype designs. Ideas on aspects of garment creations, such as the colors, fabrics and styles used, can be input into the platform any time, from anywhere during the design process. Immediate customer feedback is used to further refine the concepts. In addition to speeding up the design phase, the platform increases the chances of producing designs that are attuned to current demand.

“Don't attack everything at once,” said the supply chain company. Learn as much as possible from the venture, and build on this knowledge to take the next step in your DT journey. Importantly, don't stop after taking this initial step.

A motivated partner that is digitally smart can spark interest within your organization. “Sometimes you need an outside champion, so the organization can see success and gets motivated to transform,” said the company.

A caveat is to be careful not to rely too heavily on the expertise of outside organizations. DT often involves a change in corporate culture, and while external experts enhance your knowledge, they also bring their own corporate cultures that might complicate the task of reorienting your own.

Two-way flow

Having taken the decision to take a leap into the digital unknown, how can you prepare your organization to take on the challenge and go on to greater wins?

All the roundtable attendees highlighted the need to have the right capabilities and talent as the main challenges for DT in retail supply chains.

A fundamental question is whether a DT strategy needs to be executed in a top-down or bottom-up manner. Should senior management drive digitalization through recalcitrant business units or should the mission start within the units and work its way to the top?

A retail company from a developing country pointed out that it does not have the financial resources to invest heavily in technology. As a result, it relies on a top-down approach to reorienting the company's culture and waiting for potential results.

In general, however, it seems that a combination of both approaches gets the best results. This is borne out by the initial findings of a study underway at MIT CTL Digital Supply Chain Transformation research initiative (digitalsc.mit.edu) that is analyzing 17 large-size, international and long-term established companies from manufacturing and retail industry. The initiative's main aim is to identify the roles played by dynamic capabilities, motivation and leadership in digital supply chain transformations.

However, it is necessary to facilitate the flow of digital innovation in both directions. For example, projects should be allowed to fail fast and progress within a framework that readily connects data with performance outcomes, both in terms of digitalizing operations, as well as understanding the effects and drivers of new digital offers.

Another way to foster digitalization is to employ evangelists to spread the word. For instance, some companies hire recent graduates with relevant advanced analytic degrees to explain and promote DT projects to the workforce.

Again, there are important caveats. Make sure that these young proselytizers have a firm grasp of the managerial and organizational—not just the analytical—implications of DT. And they also need to be experienced in change management.

But not only are top-down/bottom-up vertical flows within the organization important; horizontal flows outside the organization might be key to adopting digitalization along the supply chain and finding synergies with the most talented partners.

It's worth noting that supply chain representatives are good allies in such projects, and hence productive partners. Practitioners in the supply chain discipline are boundary spanners, connectors with other functions, have the holistic picture, understand how the customer behaves and are data-driven; all ingredients of successful DT.

Building trust

Even though DT is attracting much attention in the corporate world, it still has to overcome yawning trust gaps within organizations.

Experienced employees often see DT as a threat, or are skeptical that new-fangled, high-tech solutions can be trusted. Examples include drivers who mistrust delivery schedules generated by algorithms, and sales reps that scoff at the ability of machine learning to improve monthly sales projections.

To some extent, their misgivings are justified. Algorithms are created by humans, and hence can reflect human fallibilities. Pointing out that algorithms are only as good as the human rationales that create them helps to demystify the technology.

A key question is how to balance data-driven machine learning algorithms with human factors and processes. Achieving integration between these two disparate worlds is critically important and not easy.

Value streams

Another way to build trust is to focus on how DT can deliver measurable benefits. Examples of solutions that, say, shorten innovation cycle times or increase distribution network density lessen the cynicism that DT projects can provoke. Demonstrating how machine learning helps employees to perform better is another useful approach. Sales reps become more amenable when they realize that machine learning can improve their figures with more accurate and granular demand forecasts.

Monetizing data and outcomes helps to elucidate the value streams; putting a monetary value on increased network density may not be easy but it sure helps to give meaning to DT strategies. Clarifying the monetary value of projects also enables teams to better operationalize inter-organizational relationships with partners such as logistics service providers.

Fresh perspectives

We are in the early stages of DT, and are only beginning to identify and address the challenges that impede the transition to a digitalized world.

A benefit we should not underestimate is how a well-executed DT strategy creates new knowledge and insights about deeply ingrained practices and processes.

But perhaps the most important imperative is that DT literacy is fast becoming an essential ingredient of competitiveness. As one CTL workshop attendee pointed out: "DT is attacking your supply chain, whether you are ready or not..." ☞☞